

## Special Session Description

Session Title: **The Use of Integral Experiments to Improve Nuclear Data and Covariances**

Subject Area: 3. Nuclear Data Evaluation and Assimilation of Integral Experiments

### Organizer

Alain SANTAMARINA  
CEA  
+33442257046  
alain.santamarina@cea.fr

### Description

Target-accuracies on LWR design parameters are 2-5 times lower than calculation uncertainties linked to Nuclear Data (ND). Therefore, in addition to new differential measurements, integral experiments are required. Mock-up experiments are performed, and the Representativity theory is generally used to translate the experimental information to the industrial application. However, fundamental and targeted experiments are also needed to improve international ND libraries and to produce reliable covariance matrices. This special session will cover integral experiments, validation of international ND evaluations, re-estimation of nuclear data and covariances:

- Mock-up experiments
- Integral measurements
- International Experiment Database (ICSBEP, IRPhE, SFCOMPO)
- Validation of International Evaluated Nuclear Data Files
- Selection of targeted experiments
- Assimilation of integral experiments and Re-estimation of nuclear data
- Determination of reliable covariance matrices